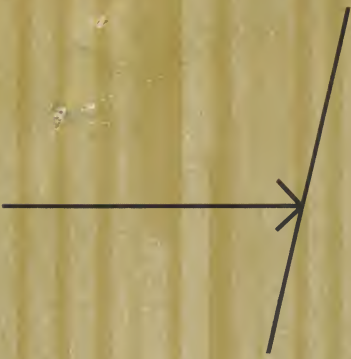




TALLY®

TAPE VERIFIER AND DUPLICATOR

MARK 20

Tally Mark 20 systems combine the Model 1644 Control Unit with Tally readers and perforators to automatically verify or duplicate tapes, or verify two tapes and perforate a third simultaneously. These compact and flexible systems provide economical verification-duplication of tapes from one through eight channels in any code structure at 60 characters per second.

There are three (3) basic modes of operation:

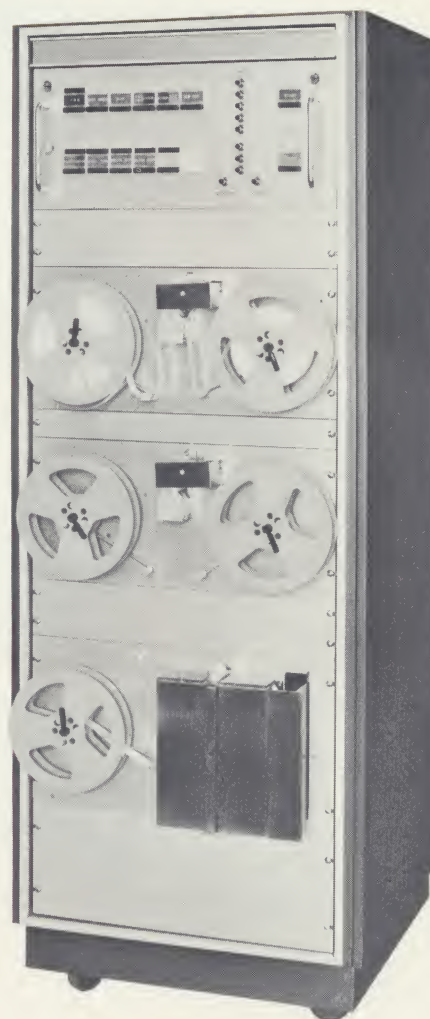
Duplication: Direct reproduction of a master tape.

Verification: Comparison of two (2) tapes bit for bit to insure that both tapes are identical. In the event of an error, the system will stop. An error light will be lit and the contents of each reader will be displayed by bit indicator lights.

Verify-Duplicate: Comparison of two (2) tapes, bit for bit, with the creation of a third tape. Detection of an error will stop the system prior to punching that character. Again, the character in each reader is displayed in the bit indicators and with the use of bit insertion switches, the operator may punch the correct character in the new tape.

OPTIONS:

1. Parity checking—This checks the parity of tape being read in the master reader. The parity check may be "on" or "off" and is also switch selectable for odd or even bit count. The system will stop on a parity error prior to punching that character.
2. Blank and/or delete skip. These two controls can be used separately or together. A reader detecting either code will skip over that code in search of a legitimate code. Skipping can occur on both readers at the same time. Each will stop independently of the other with system operation resuming when both readers are reading legitimate data.
3. Auxiliary Code Recognition—The system will detect up to four (4) specific codes to control either system functions or to provide control of external equipment.

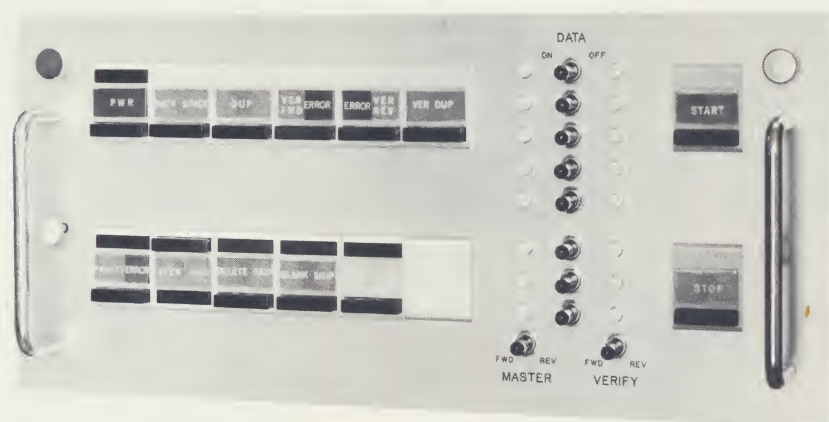


4. Auxiliary Input Buffer—This permits use of other input devices such as keyboards for tape preparation or keyboard verification.
5. Auxiliary Output Gates—This allows the customer to specify an additional output device used in conjunction with the perforator or as an alternate to the perforator.

The Mark 20 system is presently available utilizing the standard 60 cps Tally readers and perforator.

MODEL 1644

VERIFY DUPLICATE CONTROL



The solid state Model 1644 provides control logic for tape systems designed to directly duplicate a master tape, verify a tape in a bit for bit comparison with a master tape, and verify a tape in a bit for bit comparison with a master tape yielding a duplicate of the master tape as a result of the comparison.

Designed for rack mounting, the Model 1644 features tilting slides for easy access to all components. All controls are located on the front panel and are the illuminated type. The line regulated power supply is mounted on a single sub-chassis and can be wired for 115/230 v ac, 50/60 cycles. A separate sub-chassis carries logic elements on plug-in printed circuit boards. Mode selection and ac power relays are also of the plug-in type.

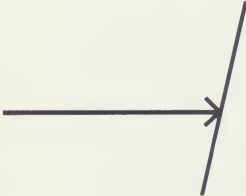
The Model 1644 processes data at 60 characters per second with the Model 420 Perforator and Model 424 Reader. As faster readers and perforators become available, the

Model 1644 will accommodate their maximum speed without modification.

Mark 20 options are determined by the 1644 control unit. The model shown incorporates the parity check and blank and delete skip.

Separate data sheets are available describing Tally tape perforators and readers. It is important for the system buyer to note that Tally manufactures everything in the Mark 20 except the cabinet. Over 6,000 field installations of Tally tape readers and perforators testify to the reliability of the instruments comprising the Mark 20 system.

The system is available as a verify only (Mark 21) or a duplicate only (Mark 22). The control unit, however, remains unchanged. Thus, a Mark 21 or 22 may be converted to a full Mark 20 system by the addition of a perforator or reader respectively.



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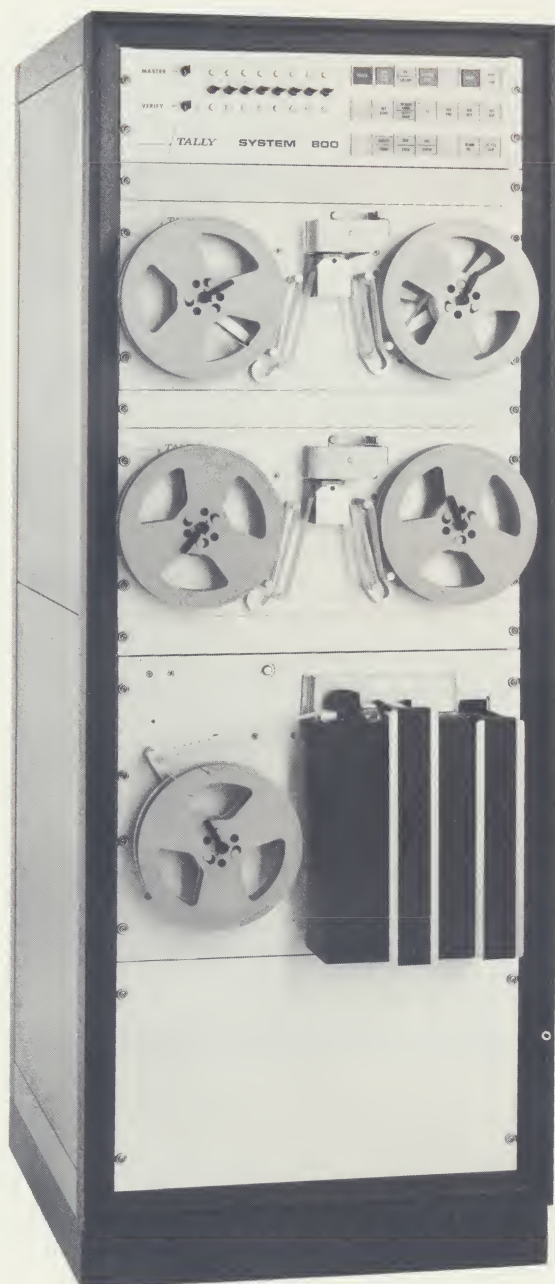
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TALLY®

TAPE VERIFIER AND DUPLICATOR

System 800



The Tally System 800 is an extremely versatile unit which provides economical verification/duplication of paper tapes from one through eight channels in any code structure at a speed of 120 characters per second. The system combines two Tally 464 readers and a P-120 perforator, plus a logic package, to automatically verify or duplicate tape, or verify two tapes and perforate a third tape simultaneously. Errors may be manually corrected by use of the bit insert switches.

MODES OF OPERATION

Duplicate: Direct duplication of the prepunched tape in the master reader on a bit for bit basis at 120 characters per second.

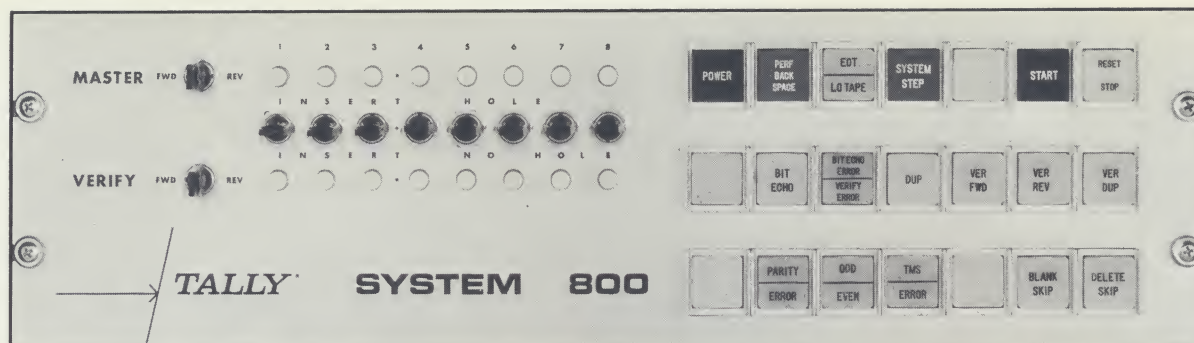
Verify: This is a bit for bit comparison of two tapes utilizing both readers to insure that the tapes are identical. If the tapes are not identical, the readers will stop on the character in error and the bit indicator lights display the data characters in each reader.

Verify/Duplicate: Verification between two tapes and duplication of a third tape. A comparison error between the two readers will stop the readers on the character in error before the duplication of that character by the perforator.

Bit Echo/Duplicate: Duplication of tape in the master reader with simultaneous verification of the duplicated tape as it is being punched in the perforator. If the data punched does not agree with the data in the master reader, the system will stop with the perforator on the character in error, thus allowing the operator to delete the erroneous character and repunch it correctly.

Bit Echo—Verify/Duplicate: Duplication of the tape in the master reader after verification against a second tape in the verify reader with simultaneous verification of the duplicated tape as it is being punched in the perforator.

A comparison error between the readers will stop the system prior to punching and illuminate the Verify Error light only. If a data character is punched incorrectly, the perforator stops the system and the Bit Echo Error light is illuminated.



The control panel of the System 800 allows the operator total command of the data tapes being duplicated or verified. Various functions of the individual controls on the panel are as follows:

Bit Indicators

The bit indicators are the two horizontal rows of white data lights which continually display the logic condition of individual data channels for the two readers. If the light is illuminated, it represents a hole condition in that channel; if the light is extinguished it represents a no-hole condition for that channel.

Bit Insert Switches

The eight bat-handle switches correspond to the eight data channels. If a data channel switch is pushed up to the Insert Hole position, a hole condition is forced in that channel in both readers. When the switch is pushed down to the Insert No-Hole position, a no-hole condition is applied to that channel in both readers. These switches allow the operator to correct errors, insert delete codes or add new characters manually.

Backspace

This is a momentary switch which allows the perforator to be backstepped one character each time it is depressed.

EOT, (End of Tape)

When either the master or verify reader reaches the end of a tape in either the forward or reverse direction, the system will stop and the EOT indicator will illuminate.

Low Tape

This light applies to a low tape condition in the per-

forator. When the tape supply has approximately 50 feet remaining, the system will stop automatically and a low tape indicator will illuminate.

System Step

This is a momentary switch that initiates system operation for one clock period each time it is depressed.

Reset Stop

This is a momentary switch having three functions: (1) It picks the reset relay enabling mode selection and system START. (2) It causes system operation to STOP when depressed. (3) It resets all error memories and extinguishes all error lights.

Bit Echo—This controls the punch pin verification of the perforator. The indicator is illuminated when the bit echo checking logic is operating. An extinguished light indicates that the checking logic is inhibited.

Bit Echo Error—If the data punched in the perforator fails to correspond with the data in the master reader, the system will stop and the bit echo portion of this indicator will illuminate.

Verify Error—When the system is operating in a verify mode, and data in the master and verify readers does not agree, the system will stop and the verify error portion of this indicator will illuminate.

The DUP, VERIFY FORWARD, VERIFY REVERSE, and VERIFY DUP indicators select the mode of operation described on the reverse side.

The control indicators on the bottom row of the panel represent optional modes of operation which are available. They function as follows:

OPTIONS

Parity/Error

If a parity error is detected in the data on the master reader, the system will stop and the error portion of this indicator will illuminate.

Odd/Even

This switch allows parity checking to be either odd or even.

TMS/Error, (Tape Motion Sensing)

If the perforator fails to advance tape whenever a sprocket hole is punched, the system will stop and

illuminate the error portion of this indicator.

Blank Skip and Delete Skip

These are two individual switches on the panel but they may be used together or separately. When a reader detects either code, it will skip over that code in search of a legitimate code. A blank or delete code condition does not affect verification between two readers or duplication of a tape.

Several blank spaces have been left in the control panel for the addition of other potential optional modes.



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